

Updates concerning *Utila* Spiny-tailed iguana

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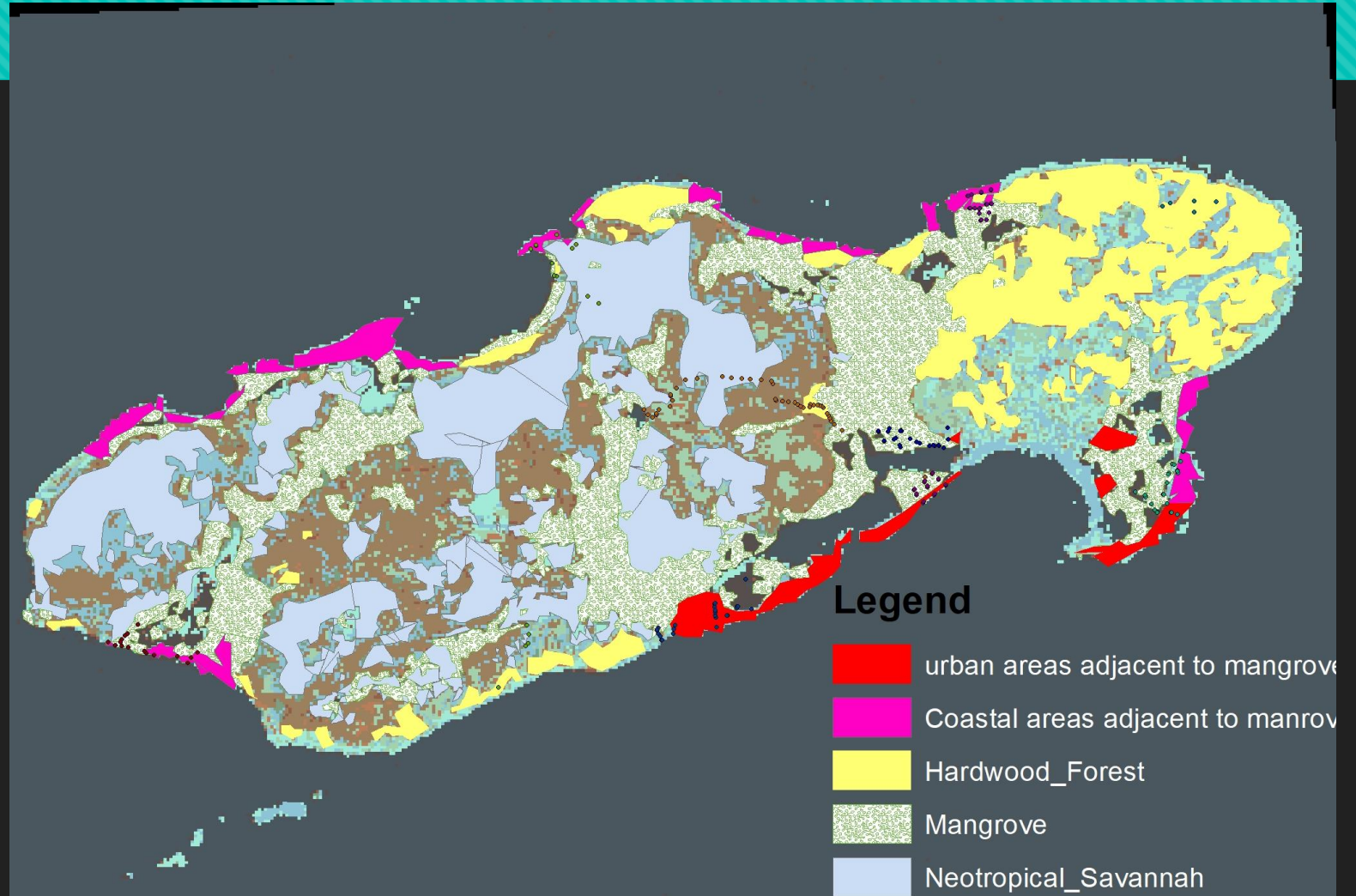
- Utila Island, part of the Islas de Bahia, Honduras
- Approx 41km²
- Famed for diving, coral reefs and whale sharks – with the terrestrial biodiversity being poorly known
- Largest mangrove system in the Bay Islands
- 4 endemic Reptile species
- *Ctenosaura bakeri* – The Swamper!
- Threatened by tourism, development, hunting pressure etc.



The island of Utila

Utila Habitats

- *C. bakeri* predominately found in Mangrove forests and coastal forests ~10km²
- Not present in Neotropical savannah
- Occasionally found in hardwood (Pumpkin hill population?)



Examples of Habitat



Habitats sites in Red mangrove,



Tique palm



Neo-tropical savannah

Number 1000!

275 *C. bakeri* caught and 65 of *Ctenosaura similis* throughout 2016-2018.

DNA extraction for hybridisation study currently taking place at University of South Wales, sequencing to start before Christmas.

A further 40 *C. bakeri* blood samples were taken for phthalates analysis by veterinary student at the Cummings School of Veterinary Medicine at Tufts University,



The Iguana team and #1000



Recaptures

Recaptured female #4

first caught Nov 2010,
recaptured august 2018.
Seems to be at least 10 years
old

Offers interesting growth data

	1 st capture Nov 2010	2 nd capture March 2011	3 rd capture August 2018
SVL (mm)	162	197	197
WT (grams)	130	240	257



Tail break frequency

- 52.6% of females have a regrowth (2011-2018 data) (Males 49.8%).
- Pasachnik *et al* 2012 reported a tail break frequency for females of 39.1%
- This could indicate increased hunting pressure for females? Or increased predation?
- Female territoriality? Home ranges of females can overlap up to 80%



Home range



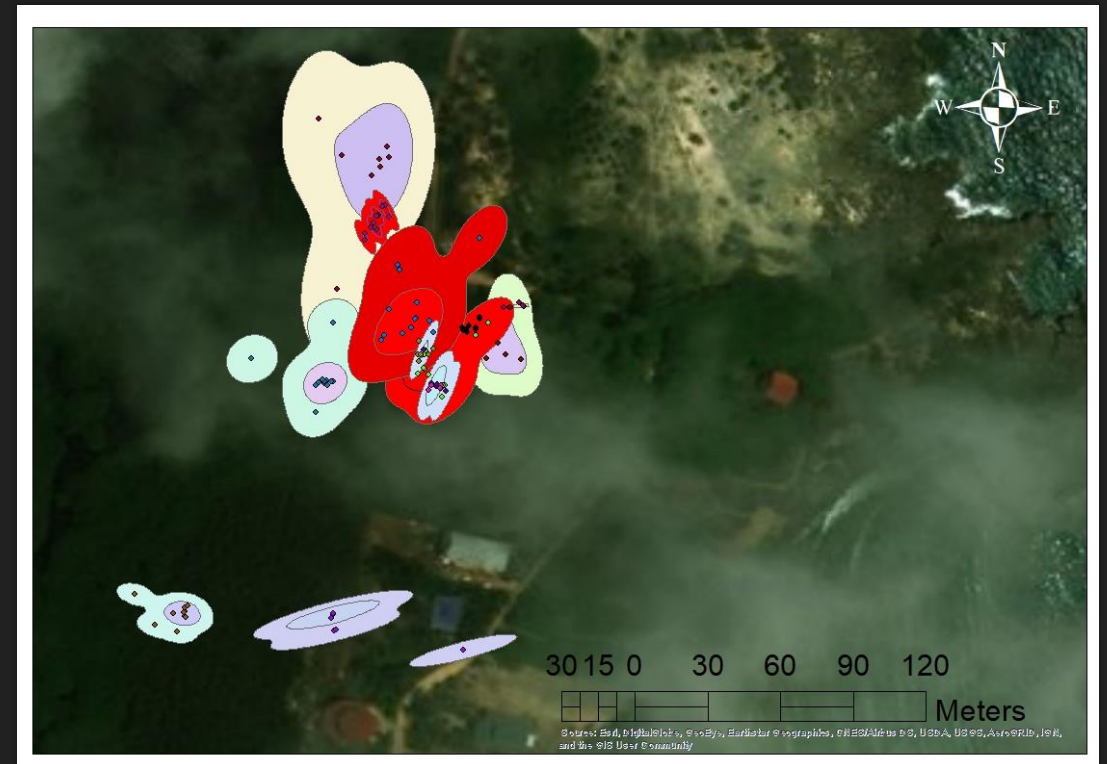
19 animals were used for the analysis of home range from two study sites, tracked Feb-April
14 females, 5 males

Mean 95% KDE for males (red): 1,206m²
95% range : 53m² to 2964m²
Mean 50% KDE: 286m²

Average 95% KDE for females: mean 967m²
95% Range :104m² to 5387m²
Mean 50% KDE: 170m²

SVL not correlated with home range

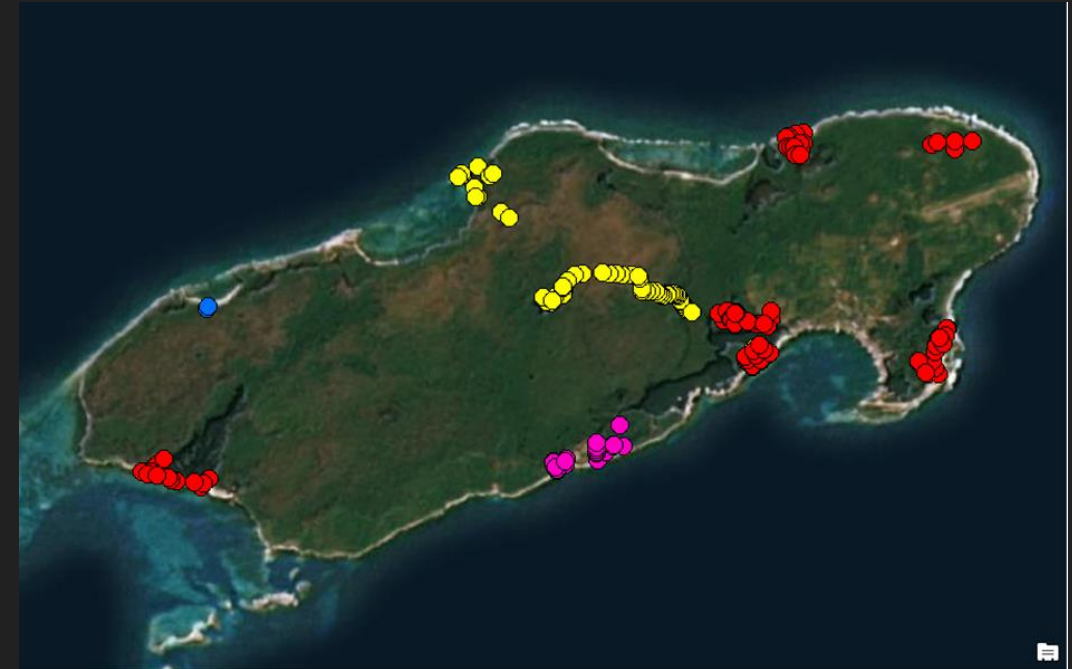
KDE Made using geospatial modelling environment with ArcGis



Home range polygons from Big Bight in east Utila

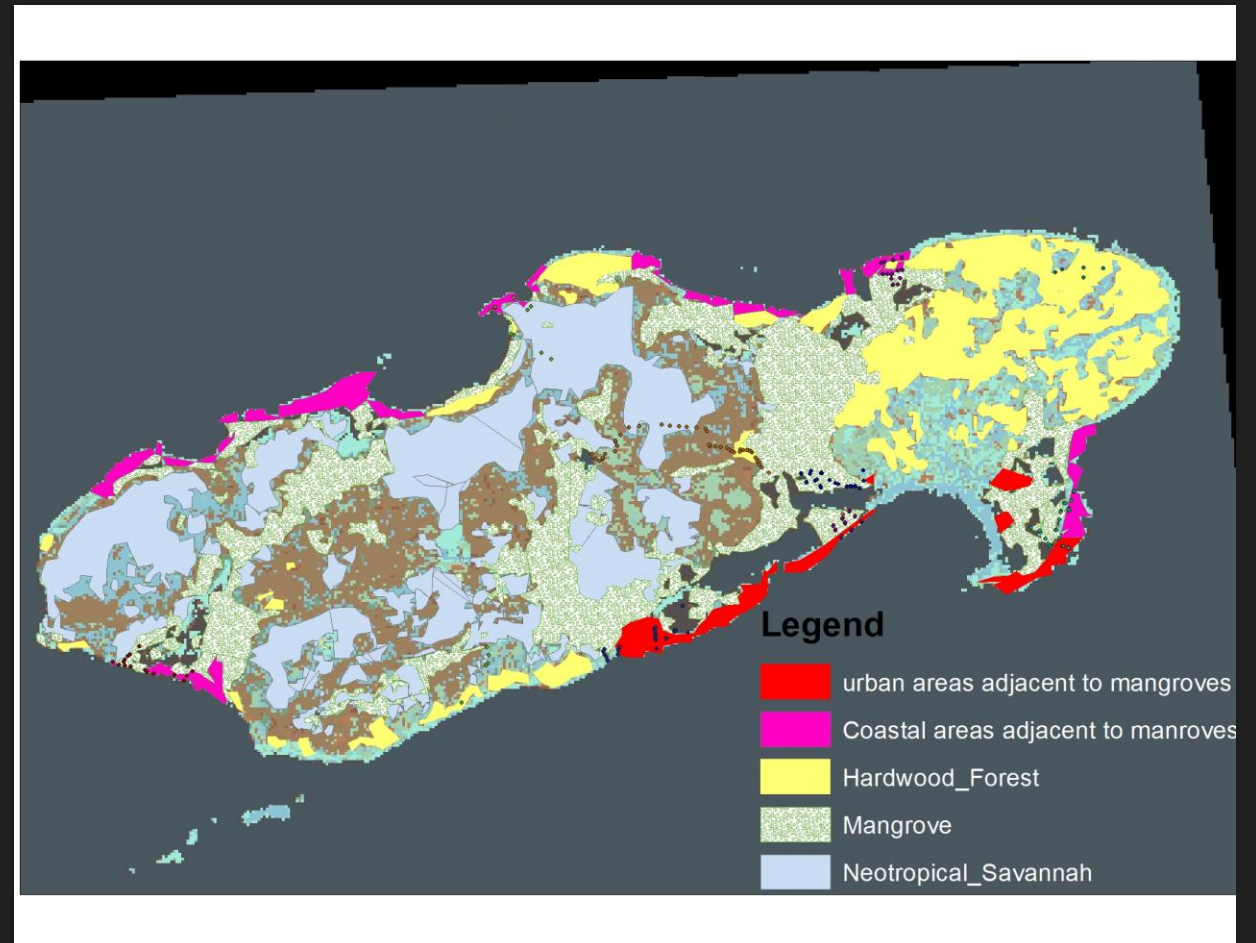
Population estimate

- Distance sampling
36 transects, 10
study sites
- New transects
added for 2018
- All habitat types
surveyed



Population estimate

- Hardwood forest - 5.23km² (Yellow)
 - Mangrove - 8.74km² (patterned)
 - Neotropical Savannah - 9.04km² (purple)
 - Coastal areas – 1.99km² (pink and red)
-
- Distance sampling from 2017 and 2018 gives us an estimate of around 12,000-13,000 adults
 - This seems like a best case scenario
 - As the landSat8 image so far cannot distinguish between different types of mangrove and quality of mangrove
 - Might be able to use drone images to break down mangrove habitat area





Varying mangrove forests

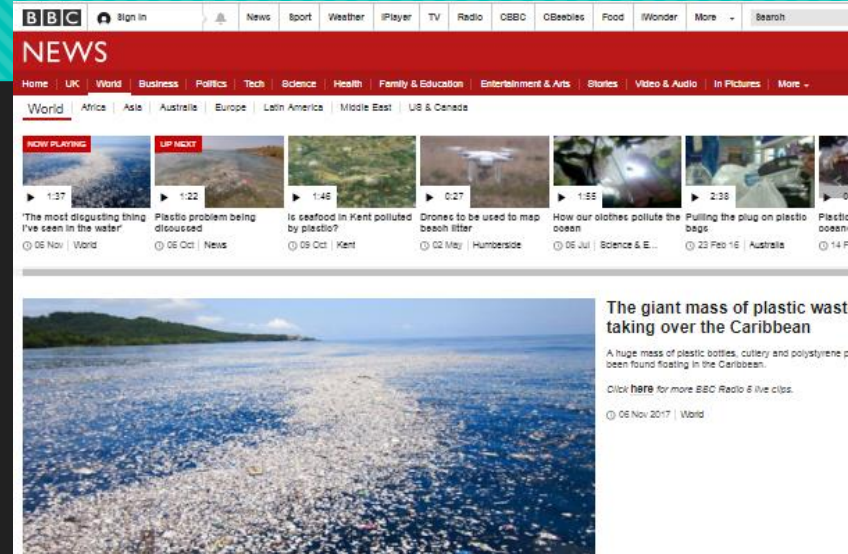


Nesting sites

- New nesting beach for *C. bakeri* discovered in the North of Utila previously been thought of as unsuitable due to its surrounding of hardwood forest and agricultural land.
- Pumpkin Hill undergoing rapid development over the past year with creation of a new road and many new housing plots.
- Small number of adult male sightings
- Population always existed in this area and is now more visible due to the deforestation of the site?
- Or iguanas are moving from other areas due to other factors, perhaps unsuitable nesting grounds elsewhere.
- Many *C. similis* are found in this habitat and it may be possible that these hatchlings are hybrids



Plastic Horror story



Plastic covering nesting Beaches important for Iguanas and Sea Turtles on Utila

Mangrove dumping site



Bakeri population found on Roatan

Discovered during
Roatan workshop
by workshop
attendees

Roatan approx. 21
miles east of Utila

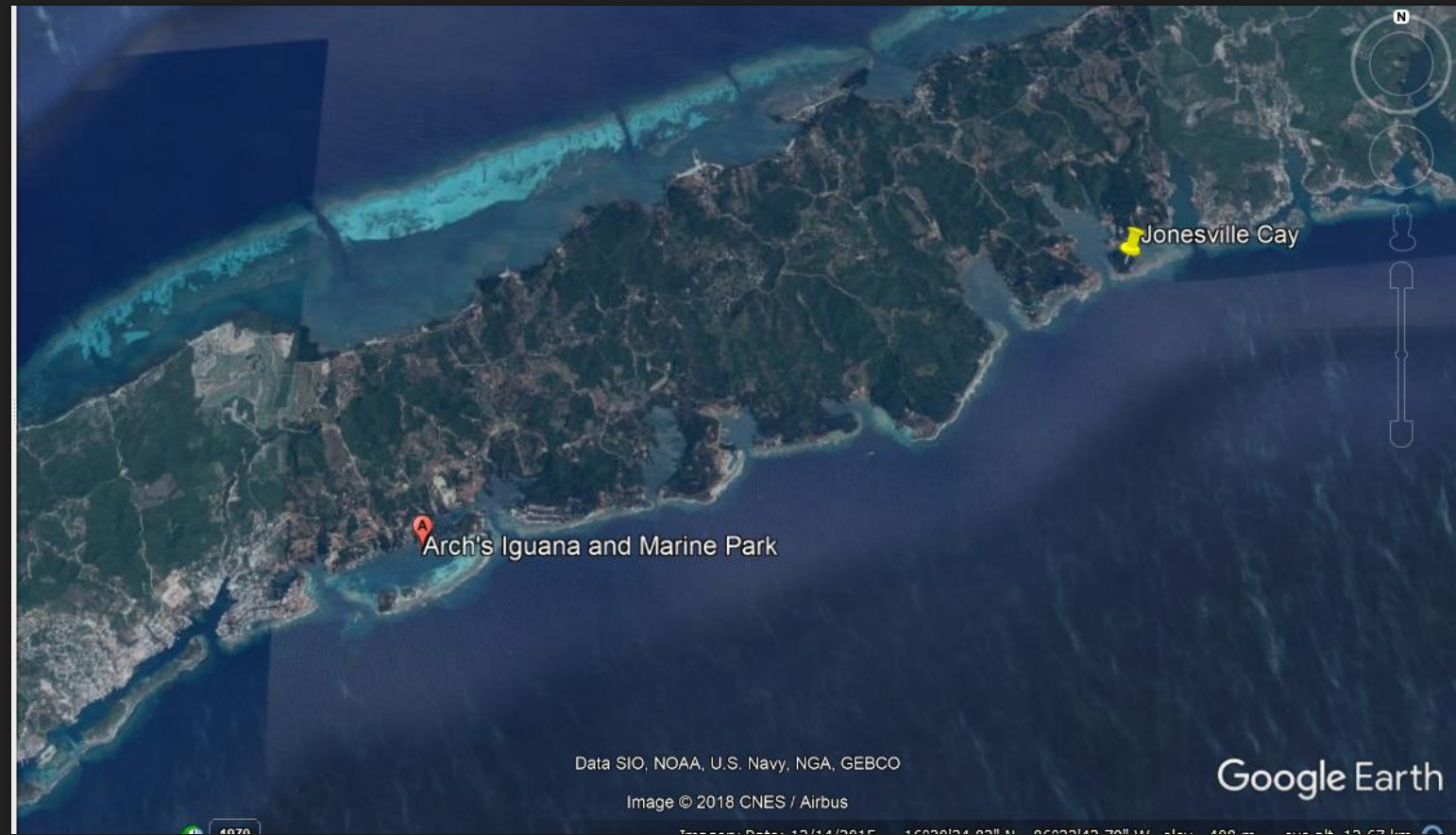
Endemic Roatan
spiny tailed
iguana
Ctenosaura
Oedirhina



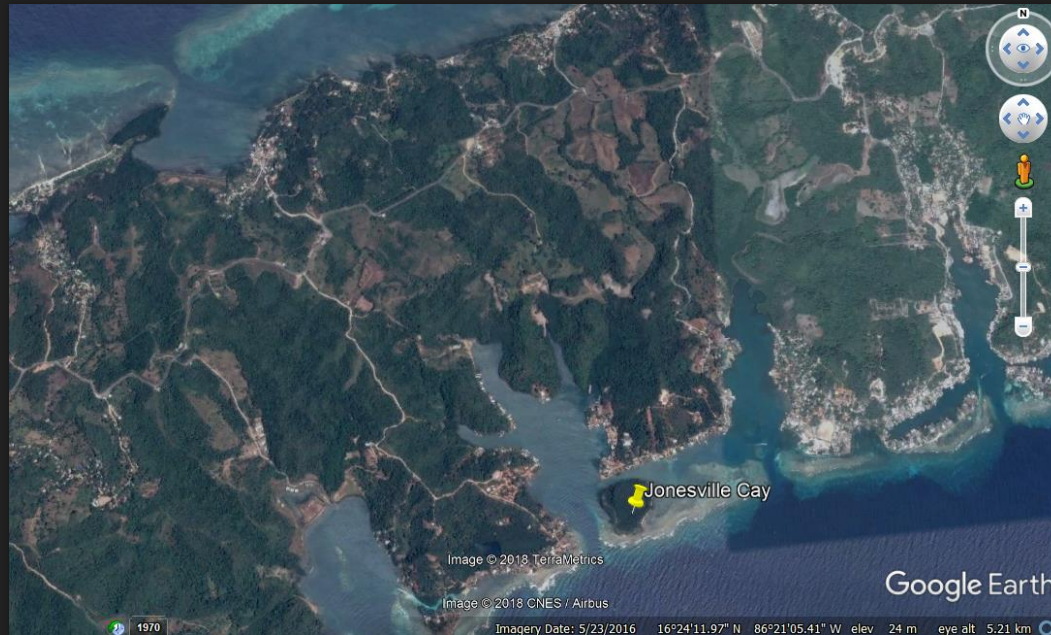
One adult male found on Roatan itself



Found at Arch's iguana farm



Established population found on Jonesville key



Jonesville key approx. 50m from Roatan mainland



Male hybrid?

Particularly large individual.

Measurements

SVL : 304mm

TL: 415

WT 1020gms

Average male bakeri from Utila:

SVL: 226mm

WT: 357gm

Largest recorded on Utila

SVL:442

WT:950



Outreach and awareness

- Environmental Education Officer –gave lectures and work shops to ~700 students throughout the year as part of the joint environmental education programme
- Workshops on plastic recycling in Utila Handmade coop
- Outreach events such as “Eyes of Utila” Photography competition – 3rd year running!



Outreach – eyes of Utila and iguana awareness

Winners of the
Eyes of Utila
competition

Top prizes were
scuba diving
courses and
kayaking in
bioluminescence



Left to right: Kanahau Director Andrea Martinez and 1st prize winner Steven, Saphira Jackson Environmental education officer with 2nd prize winner Sophia

Best iguana photo

- Special category this year for best iguana photograph
- Hatchling in mangroves with plastic cup.



Photo by winner Blake Hernandez



Utila carnival Float

- Iggy the recycling Iguana!
- Made completely of trash found on Utilas beaches
- Had 3 compartments for plastic, cans and trash
- Wheeled through the town as part of the parade so people can recycle as they party!
- Made it onto the national Honduran news!
- Used in Promodias video for Utila



Selfies with Iggy - #SaveTheSwamper



Iguana ID guide

Utila Iguana

By Elaine A. Powers

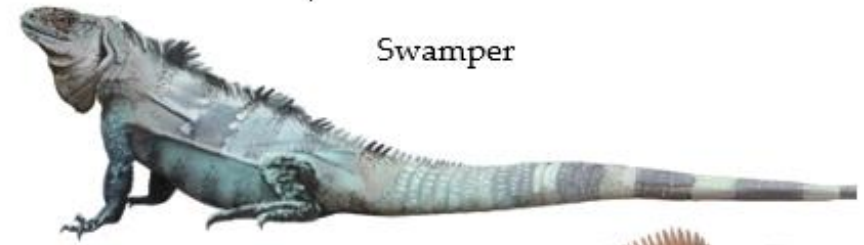
Illustrations by Anderson Atlas



Iguanas of Utila

Iguanas de Utila

Swamper



Highlander



Green



Plans for the future, new nature reserve?

- Turtle harbour 10km²
- No active protection
- Hunting of iguanas and turtles
- Invasive Racoons
- Mostly neotropical savannah



Plans for the future New Nature reserve?

- Area called “Gibsons Bay”
- West side of Utila
- Made up of Mangrove forest and coastal forest with large lagoon at back
- Confirmed nesting area
- \$419,000
- 7.14 hectares





Thank you!



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ENJOY
LEARN
PROTECT